Overall cancer mortality in the INEEL cohort was somewhat higher than expected based on regional rates, but for most cancer types was unlikely to be related to ionizing radiation exposure. Cancers that did show some evidence of association with ionizing radiation exposure include leukemia (excluding chronic lymphocytic), NHL, brain cancer, and other "radiogenic" cancers. In addition, there were elevated rates of mortality for asbestos-related diseases and accidents and some cancers among other groups of workers at the INEEL. Some strengths of the present study include the large size and well-characterized external radiation exposures of the cohort, and the relatively large population of female nuclear workers. Some limitations of the study include apparent confounding by smoking for many cancers (which may have reduced the ability to observe an association between external radiation and cancer), the fact that less than 20% of the cohort was deceased (making generalizations about mortality patterns difficult to discern for the entire cohort), the diversity of exposures across the facility, and the difficulty in assessing internal radiation and non-radiological exposures at the site. In particular, the INEEL cohort was relatively young (with a median age of 54.4) at the end of follow-up. Risk estimation for specific subcohorts and causes of death would likely be more precise with additional follow-up of this cohort. Other limitations may also be overcome through the continued follow-up of the INEEL cohort, and possible nested case-control studies within the cohort.